PORTFOLIO

LEONARDO REGUZZONI

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INTEGRATED PRODUCT DESIGN STUDENT

17-07-2001, St. Gallen, CH **currently based in Busto Arsizio (VA) Italy**
leonardopaolo.reguzzoni@mail.polimi.it… leonardoreguzzoni@hotmail.com

My name is Leonardo, but I'm better known as Guz. I grew up in Busto Arsizio, where the smog caresses the soul and where the metropolis meets the desolation of the outside world - nevertheless, I still purse a search for color and joy in everyday life. Although my arrival in the design field may appear to have happened by chance, I firmly believe that nothing truly ever happens by coincidence, and for that I continue my daily fight to bring excellence and beauty to the world and, above all, to express myself through my work (and finding my essence in the meantime, why not).

DESIGN THINKING METHODOLOGY
ELEMENT, MODEL AND INTERACTION DESIGN
3D MODELING, RENDERING
EMPATHIC DESIGN
PHISICAL PROTOTYPING

MY PROJECTS

PRODUCT DESIGN

OMNIA
Light system

GUTA
Accessibility system

MAIALINO
Wooden swine

RESOAP
Open-source saponifier

DIGITAL MODELING

PARKSIDE
Thermal gun

BUZZER
Walkie talkie

COMMUNICATION

LV LECHE
Web photoseries

INTERDISCIPLINARY

SONORA
Community train

ABOUT ME

EDUCATION

Master degree in Integrated Industrial Design
started 2023 - ONGOING
Politecnico di Milano

Honour bachelor degree in Industrial Design
2020-2023
Politecnico di Milano

International exchange semester
mar - jul 2023
FADU-UBA, Buenos Aires (Argentina)

Scientific High School Diploma
2015 - 2020
Liceo Arturo Tosi, Busto Arsizio

Degree at the Polish Consulate school
2010 – 2016
Szkoła Polska w Mediolanie, Milan

LANGUAGES

Italian native

English C1 (FIRST, Cambridge School)

Polish high proficiency

Spanish B2 (DELE, Instituto Cervantes)

PARTECIPATIONS

Ferrero workshop for Kinder surprise toys
autumn 2023
hosted by Politecnico di Milano

Mobile carpentry workstations Walden workshop
march, april 2024
hosted by Rilegno x Politecnico di Milano

Baku's Karavanseraj interdisciplinary workshop
february 2023
hosted by Azerbaijan University of Architecture

SOFT SKILLS

Natural curiosity

Flexibility and adaptability

Empathy and group skills

INTERESTS

Bricolage and DIY

Cinema and Video

Geography and history

Travelling and languages

HARD SKILLS

General design skills
user research
design strategy
prototyping
3D modelling and rendering
Autodesk AutoCAD, Alias
Solidworks
Blender
Keyshot
Rhino Grasshopper
Graphics, Editing and Drawing
Adobe Illustrator, inDesign
Adobe Photoshop; GIMP
Artrage
Figma
Videomaking and Production
Sony Vegas
Camtasia Techsmith
Prototipation
Slicing and 3D printing
Woodworking

FUN FACTS

Can instantly recognize all 254 world flags

Has a pet chicken

OMNIA

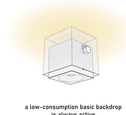
DOMOTIC SYSTEM

project type:	Bachelor's final syntesis project Academic Partnership with Artemide
end date:	jan 2023
duration:	4 months
teammates:	A. Cesa	A. Tomaghelli
academic partner	Artemide SpA

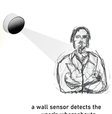
Omnia is a lighting system made up of six elements which share the same formal module, re-evaluated and sized according to the different task they ought to perform, in a total connection to a single unified system.
The work focused on designing an automatic domotic service, or smart mode: essentially a tracking system to which all the elements are connected, that will intensify the luminosity of the source based on practical needs, with a direct improvement in everyday life.

"WHEREVER YOU WILL BE. THERE WILL BE A LIGHT"

The automatic system has a dual purpose: on the one hand it considerably reduces unnecessary energy waste, and on the other it is an element of great comfort for the user, who is followed and accompanied during his daily activities without worrying about switching off anything.



a low-consumption basic backdrop is always active



a wall sensor detects the user's whereabouts

the light intensifies gradually, based on proximity

with movement, light softly dims following the user

if nothing is detected, the system deactivates

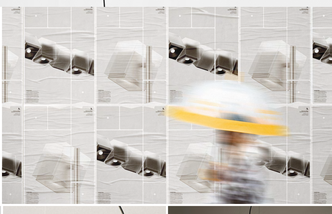
SIMPLE SHAPES FOR UNIVERSAL NEEDS

The formal reference for the lamps is a simple cube in extruded aluminum, in which two light sources are placed: the lower one provides a localized task light, while the upper one provides ambient light, damped and refracted by a second semi-transparent cube.

A VERSATILE FAMILY SYSTEM

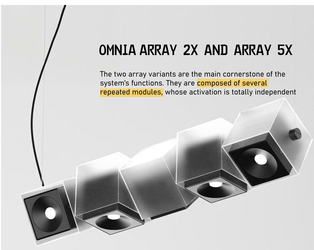
One of the objectives was to create a universal system that could be adapted to numerous environments: for this reason the formal line pursued was minimalist and essential, in line with Artemide's identity, and various different solutions have been conceived within the same system.

the family includes:
Omnia Standalone
Omnia Standalone XL
Omnia Array X5
Omnia Array X2
Omnia Floor
Omnia Wall



OMNIA ARRAY 2X AND ARRAY 5X

The two array variants are the main cornerstone of the system's functions. They are composed of several repeated modules, whose activation is totally independent



OMNIA FLOOR

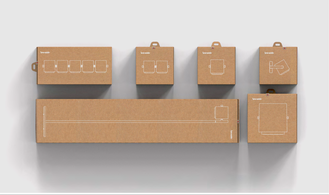
The luminous cube plays an absolute protagonist role: the thin rod supporting it highlights the formal value of the spotlight and raises it.

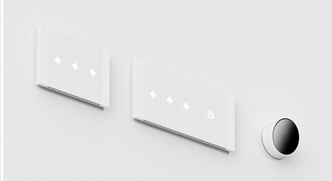
OMNIA WALL

A compact and adaptable element, designed for those narrow spaces that are difficult to spotlight.

OMNIA STAND-ALONES

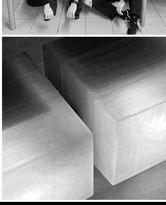
Versatile lights in two dimensional variants, embodying an elementariness designed to be placed on furniture or on the floor. They are equipped, like all the other elements, with switches for manually bypassing the smart mode.





PROTOTYPING

The Omnia system has been accurately recreated using dimmable led rods with wi-fi connection and various 3D printing technologies,

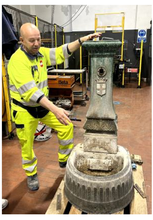


GUTA

DRINKING AID SYSTEM

project type:	Academic project
end date:	jun 2024
duration:	5 weeks
teammates:	S. Mengarelli I C. Piazzolla A. Salis I N. Tosello

Guta is a hacked product-service system designed with the aim of expanding overall accessibility and keeping track of the water quality in regards of the iconic Milan public fountains, the Vedovelle. Guta is composed of three add-ons and an integrated digital service that gets translated in a touch point via an app.
The main challenge with Guta was designing a hacking procedure that would not interfere too much with the iconicity of Milanese fountains.



TARGETING BOTH USERS AND MAINTAINERS

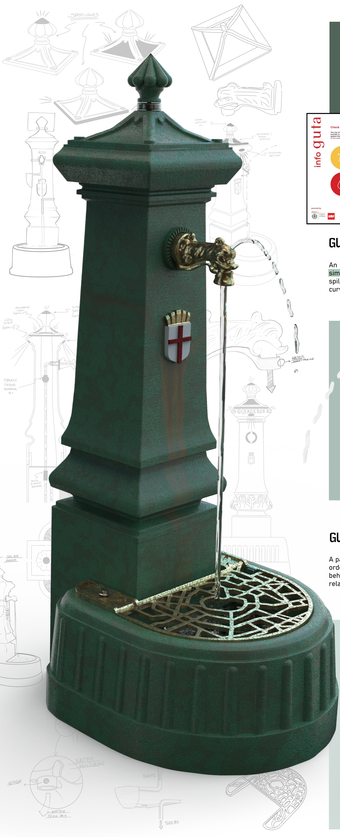
The research was conducted via a large scale data gathering and by directly collaborating with the foundries where Vedovelle are produced and with the maintenance company itself, MM.

IN MILAN THERE ARE 688 PUBLIC WATER FOUNTAINS, PUMPING UP TO 864.000 LITERS OF WATER A DAY

Milan's Vedovelle rich history and their iconic easily recognizable shape make them a staple of the city's identity that has to be left unaltered.

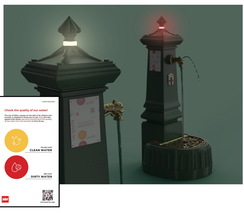
THE HACKING UPGRADE IS MADE OF THREE PHISICAL ADD-ONS AND A DIGITAL SERVICE

Vedovelle are to be fitted with add-ons that bring small improvements to the current uses, limit the need for maintenance and make monitoring easier.



GUTA LUZ

Milan's fountains are often hard to spot, and nor water quality nor interactions are monitored in real time. Guta Luz deepens user experience giving back in advance a complete report of each Vedovella.



GUTA CICININ

An easy to install parasitic product that regulates water flow through a simple twist in order to make the interaction with the fountain easier and spillage-free for all kinds of users. Lost wax casted shapes follow the tap curves without overshadowing too much past aesthetics.

GUTA BASIN

A parasitic casted brass grill, designed to cover perfectly the fountain tank in order to ensure functioning drainage, preventing debris or ill-mannered behaviours from clogging it. The city maps inspired pattern enhances the relationship between Milan and its fountains.

PCB NESTING

underneat the top cover there is a 5V battery, the PCB, the esp32 board and the BMS

TDS SENSOR

checking for water purity and constantly sends quality updates to the pcb

HYDRO-GENERATOR

mounted on the water pipes the turbine generates clean energy that powers the whole system

LED. PROX SENSORS

lighting up the fountain during the night and collecting data about use and vandalism times

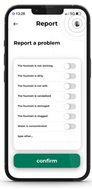
WATER LEVEL SENSOR

reporting irregular values linked to clogging in order to warn for immediate mantainance

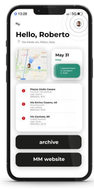
GUTA APP AND WEB

The app acts as a mapper for all the municipalities fountains and their status

Citizens can monitor water quality and use the built in navigator to get to the fountain

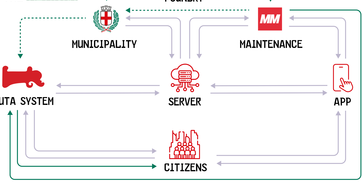


If there is a problem with the fountain, it can be easily reported directly in-app



A dedicated section for maintainers themselves has built-in report mapping and operations planning

RAISING THE FOUNTAINS TO THE NETWORK



MAIALINO

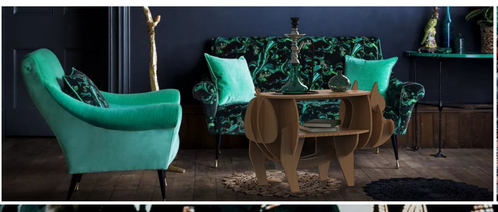
SUIFORME COFFE TABLE

project type:	Wood design prototypation
producer:	partnership with Artwood Academy (Camnago MB)
end date:	dec 2023
duration:	2 months
teammates:	S. Ciccia	F. Busani	M. Foieni

Maialino is an exuberant and histrionic piece of furniture, meant for the lounges of those who know how to not take themselves too seriously. It's a provocative statement piece made entirely of dry-assembled CNC-cut wood panels. Despite its rural appearance and the obvious satire behind it, it's still a completely functional coffee table.

PRODUCTION

Maialino is assembled by its users from a total of 19 CNC-cut pieces, without the need of any nail, screw or glue. The project focused on the feasibility of the product with a practical approach;
Designers and technicians worked side by side trough multiple attempts trying to maximizing efficiency. CNC techniques were studied and applied directly by our team, thanks to our hosting partner.



PROTOTYPATION AND SALONE EXPOSITION

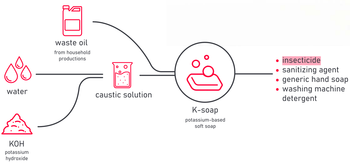
Maialino was produced in a small batch and exhibited by Artwood Academy, our partner, at the Salone Satellite during the 2023 Salone del Mobile.

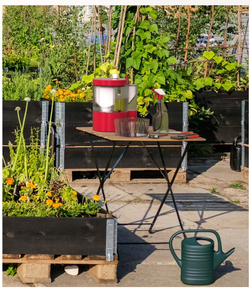
RESOAP

OPEN-SOURCE SAPONIFIER

project type:	Academic project
end date:	apr 2024
duration:	6 weeks
teammates:	S. Mengarelli	C. Piazzolla A. Salis	N. Toselio

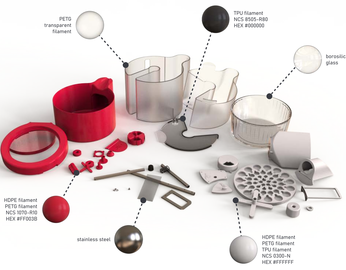
Resoap is a stackable, open source kit that transforms discarded oil wastes into a potassium-based non-toxic pesticide. The system exploits a simple saponification reaction, making it easier to replicate into urban gardens; each module has a specific function with the aim of making the whole process controlled, straightforward and easy to understand; all while including all safety measures.





AIDING URBAN GARDENS BY ELIMINATING WASTES

Waste Oils are an environment hazard and potassium soap is a circular, non-toxic and multi-purpose resource. A saponifier unit is thus particularly suited for communal spaces, as material collection is optimized and the product can be used in a more efficient form. A dual purpose is fulfilled: a difficult to discard waste is transformed into an useful alternative for the community.

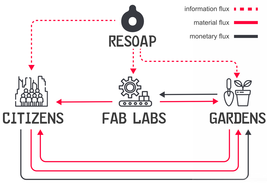

PETG transparent filament
TPU filament NCS 8505-R80 HEX #000000
borosilicate glass
HDPE filament PETG filament NCS 1070-R10 HEX #FF0038
stainless steel
HDPE filament PETG filament TPU filament NCS 0300-N HEX #FFFFFF

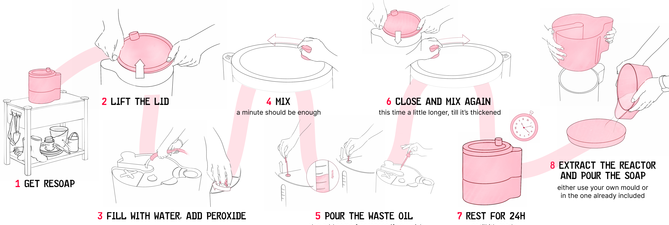
RESOAP IS OPEN SOURCE: ITS FABRICATION FILES ARE PUBLICLY AVAILABLE, AND IT'S DESIGNED TO BE DIY.

Included with the 3d files there are slicing instruction for the 3D printing, assembly instruction for putting the product together and detailed steps for recreating the saponification reaction safely.

FAB-LAB ORIENTED SERVICE

To complete the project, some hypothesis were carried out in terms of imagining how the online assistance and distribution service could work out.




1 GET RESOAP
2 LIFT THE LID
3 FILL WITH WATER. ADD PEROXIDE
4 MIX
a minute should be enough
5 POUR THE WASTE OIL
also add some fragrances if you wish
6 CLOSE AND MIX AGAIN
this time a little longer, till it's thickened
7 REST FOR 24H
or till it's ready
8 EXTRACT THE REACTOR AND POUR THE SOAP
either use your own mould or in the one already included

OIL PISTON

oil pouring is activated by pulling a spring-based piston. A TPU cap secures hermetically the liquids.

KOH DISPENSER

a dosing mechanism in the dispenser allows to automatically portion the potassium hydroxide.

OIL FILTER

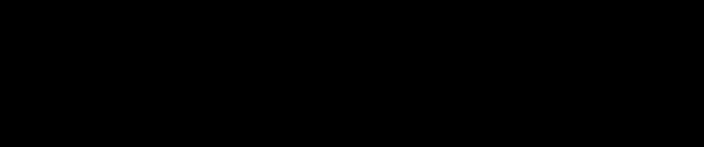
a metal mesh mounted on a sliding chassis gets inserted into the main strainer structure.

POURING SPOUT

the reactor end is funnel-like shaped in order to avoid spills

MIXING BLADE

the manually activated spinning blade blends all the components, while the reactor remains covered



PARKSIDE

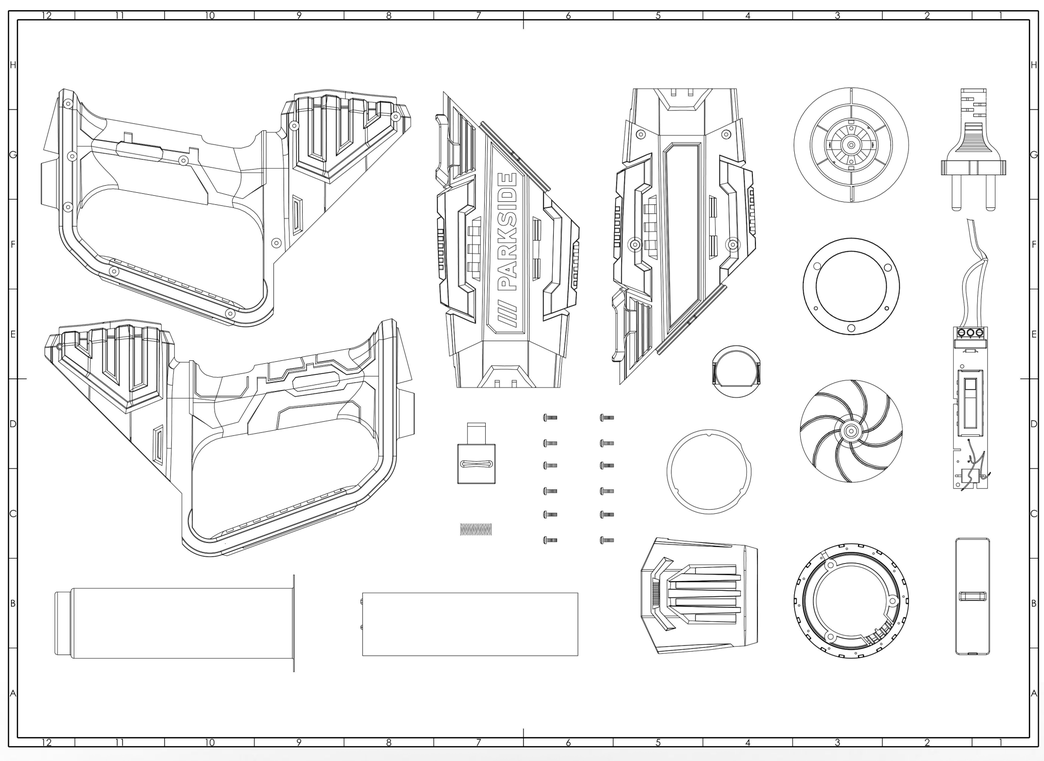
THERMAL GUN

project type:	Reverse engineering project
model name:	Parkside PHLHG2000 B2
end date:	sept 2022
duration:	3 months
teammates:	S. Boni	L. Mangili

As a modelling exercise, we measured and analyzed a common tool, in order to understand not only how it functions but how it was produced as well. It was then fully re-created from scratch using Solidworks. The resulting 3D model is accurate from an engineerical point of view and complete in every one of its part.

A METHODICAL WORK AIMED AT UNDERSTANDING INDUSTRIAL PRODUCTION

The final assembly included 18 parts, all precisely recreated with regard to the original manufacturing method. The tool is also transformable, as the handle can assume two different positions - part of the work consisted in animating the rotation of the two halves and making sure that the parts always fitted.

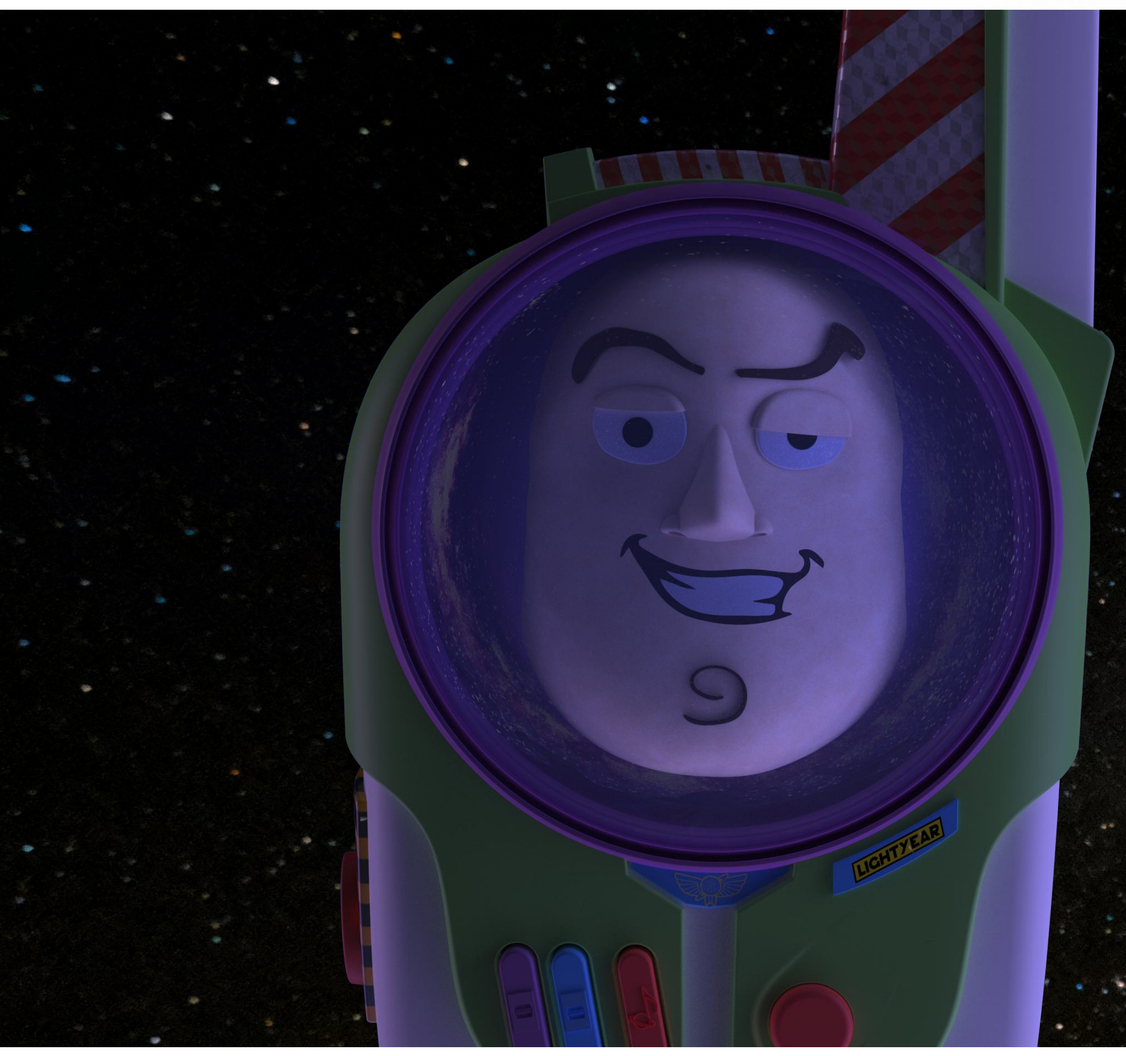


BUZZER

WALKIE TALKIE

project type:	Digital representation exercise
end date:	jan 2022
duration:	1 months

The Buzzer was made as a creativity and modeling exercise within a course of digital representation: the product aimed at showing the personal skills in a unique and flamboyant way. The program used for the modeling was Autodesk Alias, while Luxion Keyshot was used for displaying the final results as renderings.
The project is a tribute to Pixar's Toy Story (1995), the first animated film made entirely in CGI.



TO INFINITY AND BEYOND: A WALKIE TALKIE FOR NOSTALGIC KIDS AND PLAYFUL GROWNUPS

The Buzzer is a futuristic piece of hardware that only the most expert space rangers may utilize: it allows you to communicate in a trendy new way with all your friends - as long as they are in a mile and a half radius and as long as you speak one at the time. And if you don't have any friends, don't worry! Lieutenant Buzz Lightyear will keep you company with his big bad face: as he always used to say, you've got a friend in me.

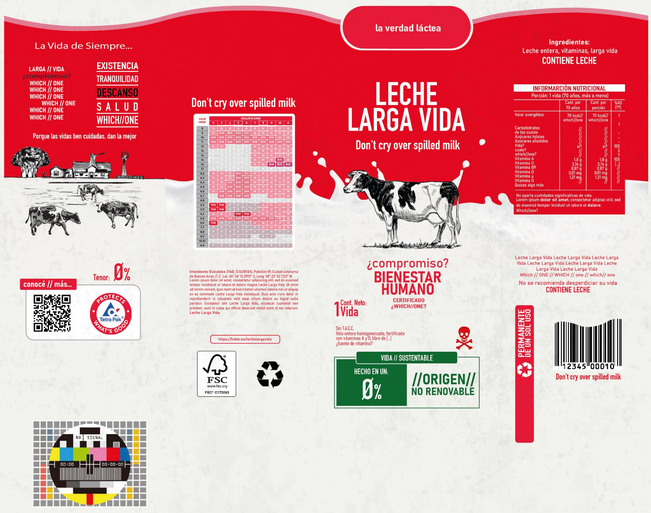
LV LECHE

PHOTOGRAPHIC PROJECT

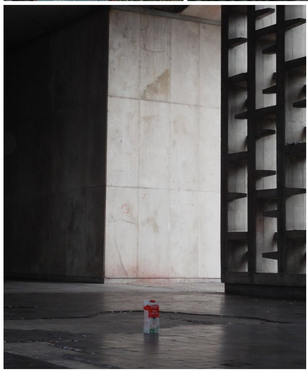
project type:	Photo gallery & webpage submitted for university
end date:	jul 2023
duration:	1 month

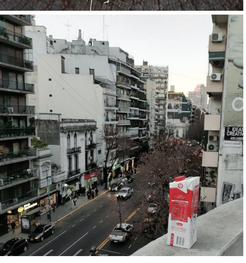
The series is based on the absurd and almost dadaist premise of creating an apparently serious artistic work on an unusually humble theme. The milk package and its frivolous claim to depth is a metaphor for all those attempts of existential reflections, so common in the contemporary world and in photography, that fail to scratch the real shell of being. The series follows an aesthetic of rejection, of abandonment; of the liminal, alienating, fleeting, which represents an existence as brief as arrogant in its title.

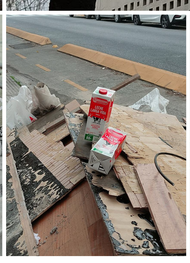
HTTPS://GHEGODESIGN.GITHUB.IO/LECHE-LARGA-WEB/



LECHE LARGA VIDA







SONORA

WAGON REFURBISHING

project type:	Academic partnership with various NGO organizations
end date:	jun 2023
duration:	3 months
teammates:	FADU's architecture and urbanism team
whereabouts:	Hurlingham, Buenos Aires; developed during an international exchange at UBA

Non-profit associations collaborated with students in the design and creation of a multifunctional space for underrepresented communities.
The reconditioned wagon, a symbol of rebirth in a marginalized neighborhood, offers a communal space that is equally suitable for children eager to play, for teens to stay off the streets and for the elderly to share their stories: here the recording headquarters of "Radio Sonora" produce socially committed media.

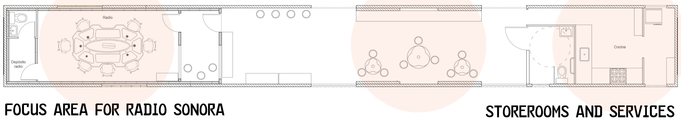
THE PROJECT IS A NON-PROFIT COLLAB BETWEEN THREE DIFFERENT ENTITIES WORKING TOWARDS A COMMON GOAL:

Sonora Social NGO promotes culture and equity in underdeveloped parts of the urban agglomeration, using visual and radio languages as a mediating tool.

The SiuS uni course gathers students from different disciplines, making them apply the skills learned during studies on a real case, with concrete limitations.

The state-owned rail company provided a disused wagon, the land ownership for placing it and volunteered the manpower and all materials for the refurbishment.

MAIN COMMUNITY SPACE



FOCUS AREA FOR RADIO SONORA

STOREROOMS AND SERVICES

MAIN COMMUNITY SPACE

The central area is conceived as a continuous space that can accommodate all of the many different cultural and educational activities organized by the Sonora: the open space promotes socialization and community aspects.

STOREROOMS AND SERVICES

A small kitchen and two bathrooms have also been added: the aim was to design an an attainable space for real life use, complete in every possible detail. Custom interiors are one of the means of pursuing an identity campaign.

FOCUS CABIN FOR RADIO SONORA

Radio broadcasting and podcasts are the heart of the association's activity: the space is designed to encourage dialogue between equals; through direct participations of the local population awareness is raised on sensitive issues. The table allows an unfiltered conversation where nobody shall be isolated.

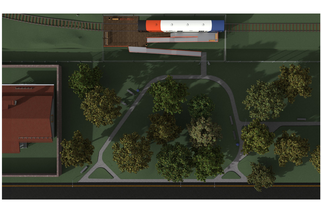
GIVING A VOICE TO THOSE WHO DON'T HAVE ONE

COMMUNICATING THE UPDATE

The graphic design team also focused on the communicative aspects, developing a new logo, ads and posters to better represent the refurbished identity of the NGO.

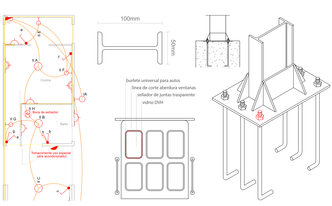
A WORK IN PROGRESS...

The wagon will occupy a space nearby the Hurlingham station, some 22 km deep into the suburbs. The project also consisted in designing the connections to the pedestrian paths, an access ramp and an outdoor patio with benches and racks.



...COMPLETE IN EVERY DETAIL

Since the work was needed by the ONG to proceed, detailed technical tables and charts had to been drawn for all of the furniture, for the hydraulic and electrical systems, for the insulation of the wagon and for the access ramp.



THAT'S IT.

THANK YOU.